

=> d his

(FILE 'HOME' ENTERED AT 16:01:56 ON 09 FEB 2006)
DEL HIS

FILE 'REGISTRY' ENTERED AT 16:03:06 ON 09 FEB 2006

L1 STRUCTURE UPLOADED

L2 3 S L1

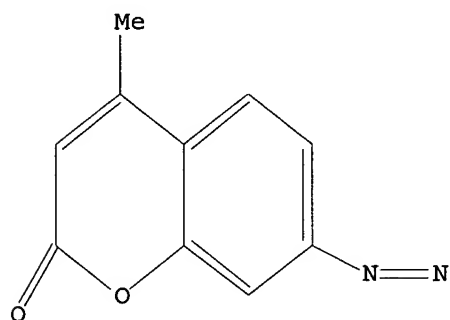
L3 78 S L1 FULL

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L4 19 S L3

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L1 STR



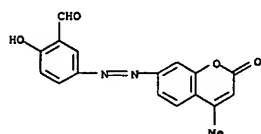
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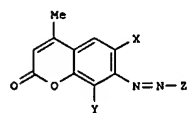
=> d 1-19 bib abs hitstr

L4 ANSWER 1 OF 19 CAPLUS COPYRIGHT 2006 ACS on STN
 AN 2005:112061 CAPLUS
 DN 143:348655
 TI Synthesis of 2-hydroxy-5-arylazobenzaldehyde by phase transfer catalysis
 AU Sun, Yi-Peng; Li, Bian-Yang
 CS Department of Chemistry, Taishan University, Taian, 271021, Peop. Rep. China
 SO Huangong Jishu Yu Kaifa (2004), 33(6), 4-7
 CODEN: HJYKAK; ISSN: 1671-9905
 PB Huangong Jishu Yu Kaifa Bianjibu
 DT Journal
 LA Chinese
 OS CASREACT 143:348655
 AB Used various arylamine as materials, a series of 2-hydroxy-5-arylazobenzaldehydes were synthesized with 53-92% yields by phase transfer catalysis. Key factors affected on coupling reaction were studied. Their structures were confirmed with ¹HNMR, MS and elemental anal.
 IT 865556-03-2P
 RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation) (synthesis of hydroxy-arylazobenzaldehyde azo dyes by phase transfer catalysis)
 RN 865556-03-2 CAPLUS
 CN Benzaldehyde, 2-hydroxy-5-[(4-methyl-2-oxo-2H-1-benzopyran-7-yl)azo]- (9CI) (CA INDEX NAME)



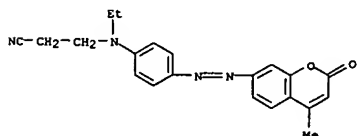
L4 ANSWER 2 OF 19 CAPLUS COPYRIGHT 2006 ACS on STN
 AN 2004:355018 CAPLUS
 DN 140:340754
 TI Coumarin disperse azo dyes, their production and their use
 IN Egli, Robert
 PA Clariant International Ltd., Switz.
 SO PCT Int. Appl., 35 pp.
 CODEN: FIXXK2
 DT Patent
 LA English
 FAN.CNT 2

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 2004035690	A1	20040429	WO 2003-184611	20031017
W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW			
RW:	GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BA, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG			
EP 1411089	A1	20040421	EP 2002-405894	20021018
R:	AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, SK			
EP 1556444	A1	20050727	EP 2003-751144	20031017
R:	AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK			
BR 2003015494	A	20050823	BR 2003-15494	20031017
JP 2006503151	T2	20060126	JP 2004-544616	20031017
PRAI EP 2002-405894	A	20021018		
GB 2002-24513	A	20021022		
WO 2003-184611	W	20031017		
OS MARPAT 140:340754				
GI				

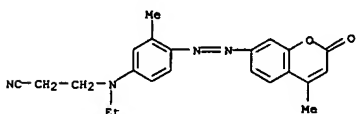


AB Disclosed are new azo dyes (I; X = H, Br, Cl, CN, SO₂Me, OH, OMe, NO₂; Y = H, Cl, Fr, CN; Z = coupling component group), their production, and their use in dyeing or jet or hot-melt printing. I are suited for use on

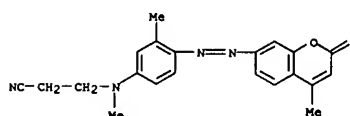
L4 ANSWER 2 OF 19 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)
 RN 680588-22-1 CAPLUS
 CN Propanenitrile, 3-[ethyl[4-[(4-methyl-2-oxo-2H-1-benzopyran-7-yl)azo]phenyl]amino]- (9CI) (CA INDEX NAME)
 on polyester fabric.
 IT 680588-20-9 680588-21-0 680588-22-1
 680588-23-2 680588-24-3 680588-25-4
 680588-26-5 680588-27-6 680588-28-7
 680588-29-8 680588-30-1 680588-31-2
 680588-32-3 680588-33-4 680588-34-5
 680588-35-6 680588-36-7 680588-37-8
 680588-38-9 680588-39-0 680588-40-3
 680588-41-4 680588-42-5 680588-43-6
 680588-44-7 680588-45-8 680588-46-9
 680588-47-0 680588-48-1 680588-49-2
 680588-50-5 680588-51-6 680588-52-7
 680588-53-8 680588-54-9 680588-55-0
 680588-56-1 680588-57-2 680588-58-4
 680588-60-7 680588-61-8 680588-62-9
 680588-63-0 680588-64-1 680588-65-2
 680588-66-3 680588-67-4 680588-68-5
 680588-69-6 680588-70-9 680588-71-0
 680588-72-1 680588-73-2 680588-74-3
 680588-75-4 680588-76-5 680588-77-6
 680588-78-7 680588-79-8 680588-80-1
 680588-81-2
 RL: TEM (Technical or engineered material use); USES (Uses) (dye; disperse azo coumarin dyes for polyester)
 RN 680588-20-9 CAPLUS
 CN Propanenitrile, 3-[ethyl[4-[(4-methyl-2-oxo-2H-1-benzopyran-7-yl)azo]phenyl]amino]- (9CI) (CA INDEX NAME)



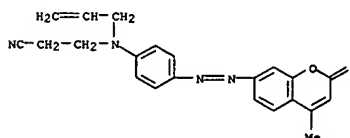
RN 680588-21-0 CAPLUS
 CN Propanenitrile, 3-[ethyl[3-methyl-4-[(4-methyl-2-oxo-2H-1-benzopyran-7-yl)azo]phenyl]amino]- (9CI) (CA INDEX NAME)



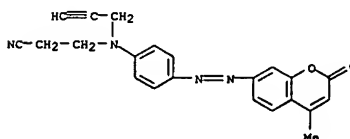
L4 ANSWER 2 OF 19 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)
 RN 680588-22-1 CAPLUS
 CN Propanenitrile, 3-[methyl[3-methyl-4-[(4-methyl-2-oxo-2H-1-benzopyran-7-yl)azo]phenyl]amino]- (9CI) (CA INDEX NAME)



RN 680588-23-2 CAPLUS
 CN Propanenitrile, 3-[[4-[(4-methyl-2-oxo-2H-1-benzopyran-7-yl)azo]phenyl]-2-propenylamino]- (9CI) (CA INDEX NAME)

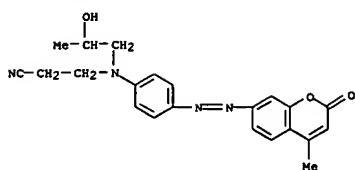


RN 680588-24-3 CAPLUS
 CN Propanenitrile, 3-[[4-[(4-methyl-2-oxo-2H-1-benzopyran-7-yl)azo]phenyl]-2-propynylamino]- (9CI) (CA INDEX NAME)

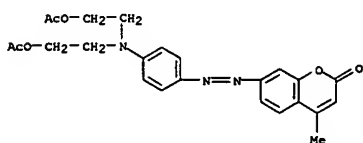


RN 680588-25-4 CAPLUS
 CN Propanenitrile, 3-[(2-hydroxypropyl)[4-[(4-methyl-2-oxo-2H-1-benzopyran-7-yl)azo]phenyl]amino]- (9CI) (CA INDEX NAME)

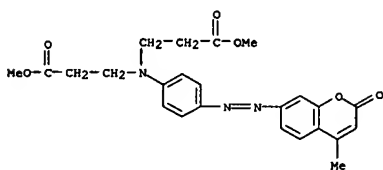
L4 ANSWER 2 OF 19 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)



RN 680588-26-5 CAPLUS
CN 2H-1-Benzopyran-2-one, 7-[[4-[(2-acetoxyethyl)amino]phenyl]azo]-4-methyl- (9CI) (CA INDEX NAME)

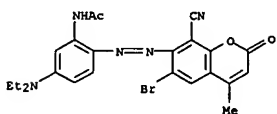


RN 680588-27-6 CAPLUS
CN β-Alanine, N-[3-methoxy-3-oxopropyl]-N-[(4-methyl-2-oxo-2H-1-benzopyran-7-yl)azo]phenyl-, methyl ester (9CI) (CA INDEX NAME)

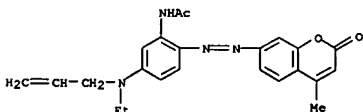


RN 680588-28-7 CAPLUS
CN Acetamide, N-[5-[(2-(acetoxyethyl)amino)-2-[(4-methyl-2-oxo-2H-1-benzopyran-7-yl)azo]phenyl]- (9CI) (CA INDEX NAME)

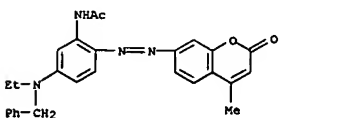
L4 ANSWER 2 OF 19 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)
CN Acetamide, N-[2-[(6-bromo-8-cyano-4-methyl-2-oxo-2H-1-benzopyran-7-yl)azo]-5-(diethylamino)phenyl]- (9CI) (CA INDEX NAME)



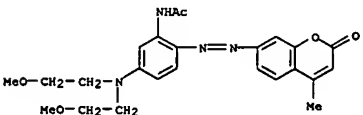
RN 680588-33-4 CAPLUS
CN Acetamide, N-[5-(ethyl-2-propenylamino)-2-[(4-methyl-2-oxo-2H-1-benzopyran-7-yl)azo]phenyl]- (9CI) (CA INDEX NAME)



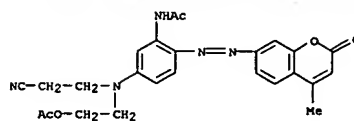
RN 680588-34-5 CAPLUS
CN Acetamide, N-[5-[ethyl(phenylmethyl)amino]-2-[(4-methyl-2-oxo-2H-1-benzopyran-7-yl)azo]phenyl]- (9CI) (CA INDEX NAME)



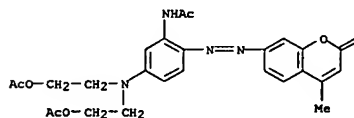
RN 680588-35-6 CAPLUS
CN Acetamide, N-[5-[bis(2-methoxyethyl)amino]-2-[(4-methyl-2-oxo-2H-1-benzopyran-7-yl)azo]phenyl]- (9CI) (CA INDEX NAME)



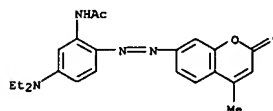
L4 ANSWER 2 OF 19 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)



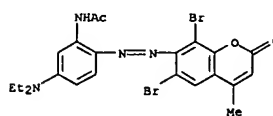
RN 680588-29-8 CAPLUS
CN Acetamide, N-[5-[bis(2-(acetoxyethyl)amino)ethyl]amino]-2-[(4-methyl-2-oxo-2H-1-benzopyran-7-yl)azo]phenyl]- (9CI) (CA INDEX NAME)



RN 680588-30-1 CAPLUS
CN Acetamide, N-[5-(diethylamino)-2-[(4-methyl-2-oxo-2H-1-benzopyran-7-yl)azo]phenyl]- (9CI) (CA INDEX NAME)



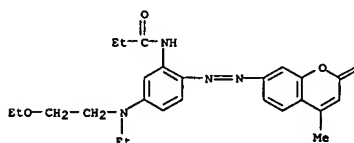
RN 680588-31-2 CAPLUS
CN Acetamide, N-[2-[(6,8-dibromo-4-methyl-2-oxo-2H-1-benzopyran-7-yl)azo]-5-(diethylamino)phenyl]- (9CI) (CA INDEX NAME)



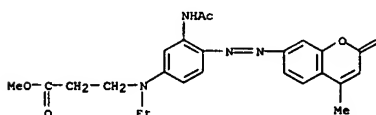
RN 680588-32-3 CAPLUS

L4 ANSWER 2 OF 19 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)

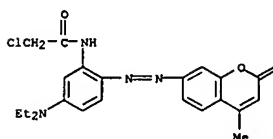
RN 680588-36-7 CAPLUS
CN Propanamide, N-[5-[(2-ethoxyethyl)ethylamino]-2-[(4-methyl-2-oxo-2H-1-benzopyran-7-yl)azo]phenyl]- (9CI) (CA INDEX NAME)



RN 680588-37-8 CAPLUS
CN β-Alanine, N-[3-(acetylaminio)-4-[(4-methyl-2-oxo-2H-1-benzopyran-7-yl)azo]phenyl]-N-ethyl-, methyl ester (9CI) (CA INDEX NAME)

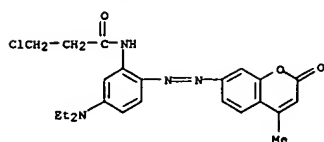


RN 680588-38-9 CAPLUS
CN Acetamide, 2-chloro-N-[5-(diethylamino)-2-[(4-methyl-2-oxo-2H-1-benzopyran-7-yl)azo]phenyl]- (9CI) (CA INDEX NAME)

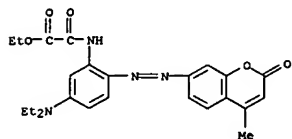


RN 680588-39-0 CAPLUS
CN Propanamide, 3-chloro-N-[5-(diethylamino)-2-[(4-methyl-2-oxo-2H-1-benzopyran-7-yl)azo]phenyl]- (9CI) (CA INDEX NAME)

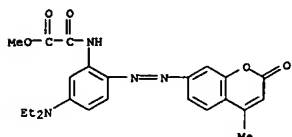
L4 ANSWER 2 OF 19 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)



RN 680588-40-3 CAPLUS
 CN Acetic acid, [[5-(diethylamino)-2-[(4-methyl-2-oxo-2H-1-benzopyran-7-yl)azo]phenyl]amino]oxo-, ethyl ester (9CI) (CA INDEX NAME)

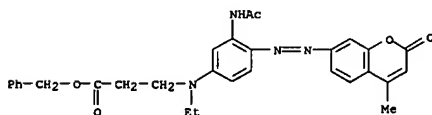


RN 680588-41-4 CAPLUS
 CN Acetic acid, [[5-(diethylamino)-2-[(4-methyl-2-oxo-2H-1-benzopyran-7-yl)azo]phenyl]amino]oxo-, methyl ester (9CI) (CA INDEX NAME)

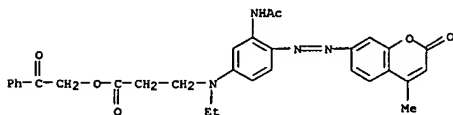


RN 680588-42-5 CAPLUS
 CN Acetamide, N-[5-(diethylamino)-2-[(4-methyl-2-oxo-2H-1-benzopyran-7-yl)azo]phenyl]-2-methoxy- (9CI) (CA INDEX NAME)

L4 ANSWER 2 OF 19 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)

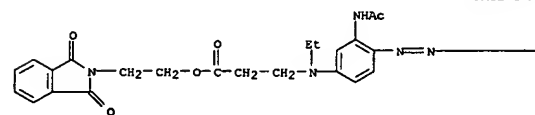


RN 680588-46-9 CAPLUS
 CN beta-Alanine, N-[3-(acetylamino)-4-[(4-methyl-2-oxo-2H-1-benzopyran-7-yl)azo]phenyl]-N-ethyl-, 2-oxo-2-phenylethyl ester (9CI) (CA INDEX NAME)

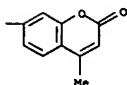


RN 680588-47-0 CAPLUS
 CN beta-Alanine, N-[3-(acetylamino)-4-[(4-methyl-2-oxo-2H-1-benzopyran-7-yl)azo]phenyl]-N-ethyl-, 2-(1,3-dihydro-1,3-dioxo-2H-isoindol-2-yl)ethyl ester (9CI) (CA INDEX NAME)

PAGE 1-A

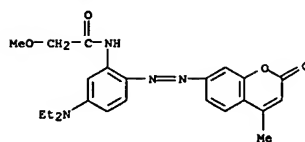


PAGE 1-B

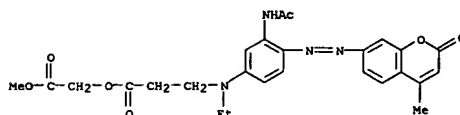


RN 680588-48-1 CAPLUS
 CN Propanenitrile, 3-[[3-methyl-4-[(4-methyl-2-oxo-2H-1-benzopyran-7-yl)azo]phenyl]-2-propenylamino]- (9CI) (CA INDEX NAME)

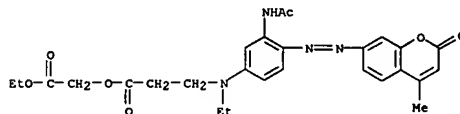
L4 ANSWER 2 OF 19 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)



RN 680588-43-6 CAPLUS
 CN beta-Alanine, N-[3-(acetylamino)-4-[(4-methyl-2-oxo-2H-1-benzopyran-7-yl)azo]phenyl]-N-ethyl-, 2-methoxy-2-oxoethyl ester (9CI) (CA INDEX NAME)

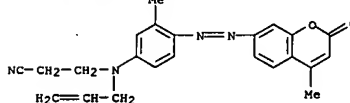


RN 680588-44-7 CAPLUS
 CN beta-Alanine, N-[3-(acetylamino)-4-[(4-methyl-2-oxo-2H-1-benzopyran-7-yl)azo]phenyl]-N-ethyl-, 2-ethoxy-2-oxoethyl ester (9CI) (CA INDEX NAME)

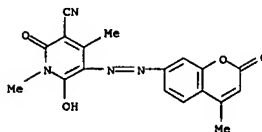


RN 680588-45-8 CAPLUS
 CN beta-Alanine, N-[3-(acetylamino)-4-[(4-methyl-2-oxo-2H-1-benzopyran-7-yl)azo]phenyl]-N-ethyl-, phenylmethyl ester (9CI) (CA INDEX NAME)

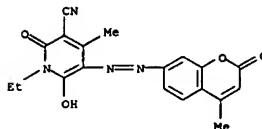
L4 ANSWER 2 OF 19 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)



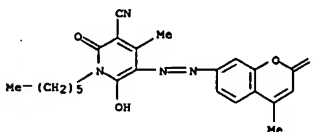
RN 680588-49-2 CAPLUS
 CN 3-Pyridinecarbonitrile, 1-ethyl-1,2-dihydro-6-hydroxy-4-methyl-5-[(4-methyl-2-oxo-2H-1-benzopyran-7-yl)azo]-2-oxo- (9CI) (CA INDEX NAME)



RN 680588-50-5 CAPLUS
 CN 3-Pyridinecarbonitrile, 1-ethyl-1,2-dihydro-6-hydroxy-4-methyl-5-[(4-methyl-2-oxo-2H-1-benzopyran-7-yl)azo]-2-oxo- (9CI) (CA INDEX NAME)

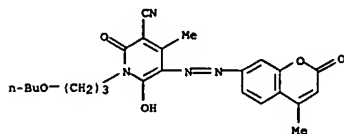


RN 680588-51-6 CAPLUS
 CN 3-Pyridinecarbonitrile, 1-hexyl-1,2-dihydro-6-hydroxy-4-methyl-5-[(4-methyl-2-oxo-2H-1-benzopyran-7-yl)azo]-2-oxo- (9CI) (CA INDEX NAME)

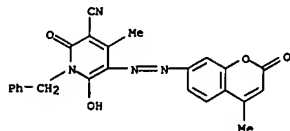


RN 680588-52-7 CAPLUS

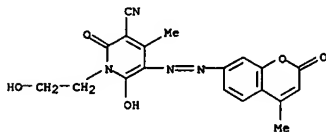
L4 ANSWER 2 OF 19 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)
 CN 3-Pyridinecarbonitrile,
 1-(3-butoxypropyl)-1,2-dihydro-6-hydroxy-4-methyl-
 5-[(4-methyl-2-oxo-2H-1-benzopyran-7-yl)azo]-2-oxo- (9CI) (CA INDEX
 NAME)



RN 680588-53-8 CAPLUS
 CN 3-Pyridinecarbonitrile,
 1,2-dihydro-6-hydroxy-4-methyl-5-[(4-methyl-2-oxo-
 2H-1-benzopyran-7-yl)azo]-2-oxo-1-(phenylmethyl)- (9CI) (CA INDEX NAME)

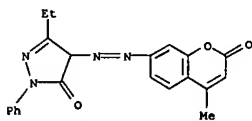


RN 680588-54-9 CAPLUS
 CN 3-Pyridinecarbonitrile,
 1,2-dihydro-6-hydroxy-1-(2-hydroxyethyl)-4-methyl-
 5-[(4-methyl-2-oxo-2H-1-benzopyran-7-yl)azo]-2-oxo- (9CI) (CA INDEX
 NAME)

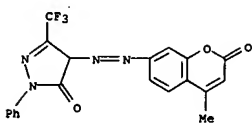


RN 680588-55-0 CAPLUS
 CN 1(2H)-Pyridinepropanoic acid, 3-cyano-6-hydroxy-4-methyl-5-[(4-methyl-2-
 oxo-2H-1-benzopyran-7-yl)azo]-2-oxo-, methyl ester (9CI) (CA INDEX NAME)

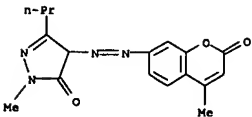
L4 ANSWER 2 OF 19 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)



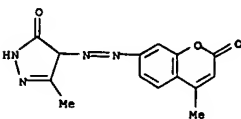
RN 680588-60-7 CAPLUS
 CN 2H-1-Benzopyran-2-one,
 7-[[4,5-dihydro-5-oxo-1-phenyl-3-(trifluoromethyl)-
 1H-pyrazol-4-yl]azo]-4-methyl- (9CI) (CA INDEX NAME)



RN 680588-61-8 CAPLUS
 CN 2H-1-Benzopyran-2-one,
 7-[(4,5-dihydro-1-methyl-5-oxo-3-propyl-1H-pyrazol-
 4-yl)azo]-4-methyl- (9CI) (CA INDEX NAME)

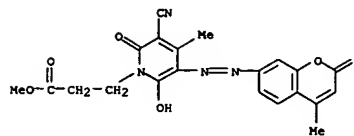


RN 680588-62-9 CAPLUS
 CN 2H-1-Benzopyran-2-one,
 7-[(4,5-dihydro-3-methyl-5-oxo-1H-pyrazol-4-yl)azo]-
 4-methyl- (9CI) (CA INDEX NAME)

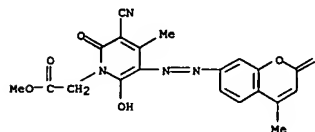


RN 680588-63-0 CAPLUS

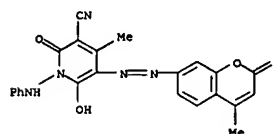
L4 ANSWER 2 OF 19 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)



RN 680588-56-1 CAPLUS
 CN 1(2H)-Pyridineacetic acid, 3-cyano-6-hydroxy-4-methyl-5-[(4-methyl-2-oxo-
 2H-1-benzopyran-7-yl)azo]-2-oxo-, methyl ester (9CI) (CA INDEX NAME)

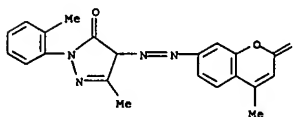


RN 680588-57-2 CAPLUS
 CN 3-Pyridinecarbonitrile,
 1,2-dihydro-6-hydroxy-4-methyl-5-[(4-methyl-2-oxo-
 2H-1-benzopyran-7-yl)azo]-2-oxo-1-(phenylamino)- (9CI) (CA INDEX NAME)

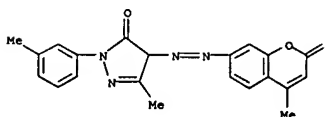


RN 680588-59-4 CAPLUS
 CN 2H-1-Benzopyran-2-one,
 7-[(3-ethyl-4,5-dihydro-5-oxo-1-phenyl-1H-pyrazol-4-
 yl)azo]-4-methyl- (9CI) (CA INDEX NAME)

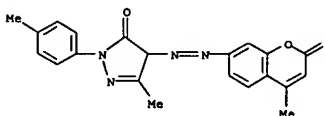
L4 ANSWER 2 OF 19 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)
 CN 2H-1-Benzopyran-2-one, 7-[[4,5-dihydro-3-methyl-1-(2-methylphenyl)-5-oxo-
 1H-pyrazol-4-yl]azo]-4-methyl- (9CI) (CA INDEX NAME)



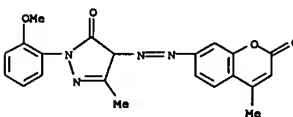
RN 680588-64-1 CAPLUS
 CN 2H-1-Benzopyran-2-one, 7-[[4,5-dihydro-3-methyl-1-(3-methylphenyl)-5-oxo-
 1H-pyrazol-4-yl]azo]-4-methyl- (9CI) (CA INDEX NAME)



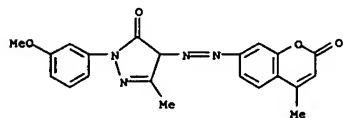
RN 680588-65-2 CAPLUS
 CN 2H-1-Benzopyran-2-one, 7-[[4,5-dihydro-3-methyl-1-(4-methylphenyl)-5-oxo-
 1H-pyrazol-4-yl]azo]-4-methyl- (9CI) (CA INDEX NAME)



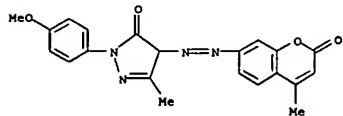
RN 680588-66-3 CAPLUS
 CN 2H-1-Benzopyran-2-one,
 7-[[4,5-dihydro-1-(2-methoxyphenyl)-3-methyl-5-oxo-
 1H-pyrazol-4-yl]azo]-4-methyl- (9CI) (CA INDEX NAME)



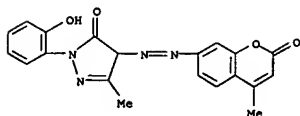
L4 ANSWER 2 OF 19 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)
 RN 680588-67-4 CAPLUS
 CN 2H-1-Benzopyran-2-one,
 7-[[4,5-dihydro-1-(3-methoxyphenyl)-3-methyl-5-oxo-
 1H-pyrazol-4-yl]azo]-4-methyl- (9CI) (CA INDEX NAME)



RN 680588-68-5 CAPLUS
 CN 2H-1-Benzopyran-2-one,
 7-[[4,5-dihydro-1-(4-methoxyphenyl)-3-methyl-5-oxo-
 1H-pyrazol-4-yl]azo]-4-methyl- (9CI) (CA INDEX NAME)

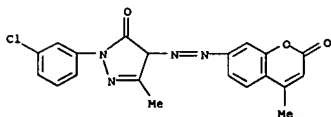


RN 680588-69-6 CAPLUS
 CN 2H-1-Benzopyran-2-one,
 7-[[4,5-dihydro-1-(2-hydroxyphenyl)-3-methyl-5-oxo-
 1H-pyrazol-4-yl]azo]-4-methyl- (9CI) (CA INDEX NAME)

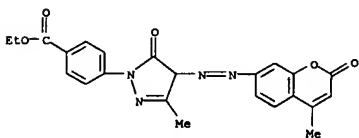


RN 680588-70-9 CAPLUS
 CN 2H-1-Benzopyran-2-one,
 7-[[4,5-dihydro-1-(3-hydroxyphenyl)-3-methyl-5-oxo-
 1H-pyrazol-4-yl]azo]-4-methyl- (9CI) (CA INDEX NAME)

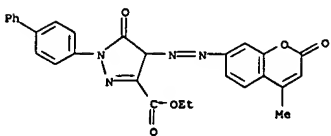
L4 ANSWER 2 OF 19 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)



RN 680588-74-3 CAPLUS
 CN Benzoic acid,
 4-[[4,5-dihydro-3-methyl-4-[[4-methyl-2-oxo-2H-1-benzopyran-7-
 yl]azo]-5-oxo-1H-pyrazol-1-yl]-, ethyl ester (9CI) (CA INDEX NAME)

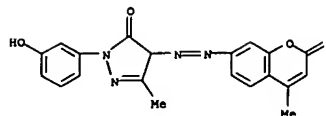


RN 680588-75-4 CAPLUS
 CN 1H-Pyrazole-3-carboxylic acid, 1-[1,1'-biphenyl]-4-yl-4,5-dihydro-4-[[4-methyl-2-oxo-2H-1-benzopyran-7-yl]azo]-5-oxo-, ethyl ester (9CI) (CA INDEX NAME)

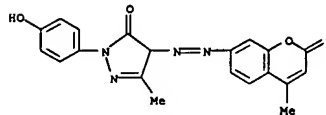


RN 680588-76-5 CAPLUS
 CN 2H-1-Benzopyran-2-one, 7-[[4,5-dihydro-1-(4-(2-hydroxypropyl)phenyl)-3-methyl-5-oxo-1H-pyrazol-4-yl]azo]-4-methyl- (9CI) (CA INDEX NAME)

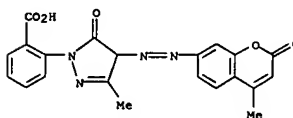
L4 ANSWER 2 OF 19 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)



RN 680588-71-0 CAPLUS
 CN 2H-1-Benzopyran-2-one,
 7-[[4,5-dihydro-1-(4-hydroxyphenyl)-3-methyl-5-oxo-
 1H-pyrazol-4-yl]azo]-4-methyl- (9CI) (CA INDEX NAME)

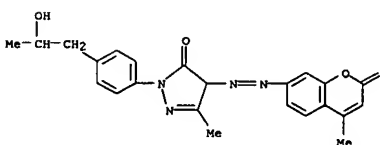


RN 680588-72-1 CAPLUS
 CN Benzoic acid,
 2-[[4,5-dihydro-3-methyl-4-[[4-methyl-2-oxo-2H-1-benzopyran-7-
 yl]azo]-5-oxo-1H-pyrazol-1-yl]- (9CI) (CA INDEX NAME)

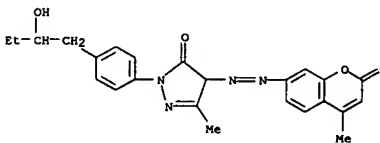


RN 680588-73-2 CAPLUS
 CN 2H-1-Benzopyran-2-one, 7-[[1-(3-chlorophenyl)-4,5-dihydro-3-methyl-5-oxo-1H-pyrazol-4-yl]azo]-4-methyl- (9CI) (CA INDEX NAME)

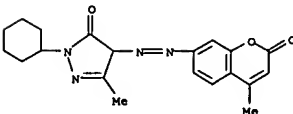
L4 ANSWER 2 OF 19 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)



RN 680588-77-6 CAPLUS
 CN 2H-1-Benzopyran-2-one, 7-[[4,5-dihydro-1-(4-(2-hydroxybutyl)phenyl)-3-methyl-5-oxo-1H-pyrazol-4-yl]azo]-4-methyl- (9CI) (CA INDEX NAME)

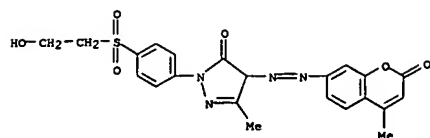


RN 680588-78-7 CAPLUS
 CN 2H-1-Benzopyran-2-one, 7-[[1-(cyclohexyl)-4,5-dihydro-3-methyl-5-oxo-1H-pyrazol-4-yl]azo]-4-methyl- (9CI) (CA INDEX NAME)

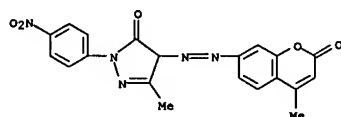


RN 680588-79-8 CAPLUS
 CN 2H-1-Benzopyran-2-one, 7-[[4,5-dihydro-1-[4-[(2-hydroxyethyl)sulfonyl]phenyl]-3-methyl-5-oxo-1H-pyrazol-4-yl]azo]-4-methyl- (9CI) (CA INDEX NAME)

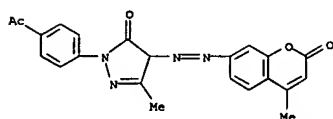
L4 ANSWER 2 OF 19 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)



RN 680588-80-1 CAPLUS
 CN 2H-1-Benzopyran-2-one,
 7-[[4,5-dihydro-3-methyl-1-(4-nitrophenyl)-5-oxo-1H-
 pyrazol-4-yl]azo]-4-methyl- (9CI) (CA INDEX NAME)



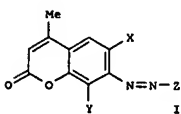
RN 680588-81-2 CAPLUS
 CN 2H-1-Benzopyran-2-one, 7-[[1-(4-acetylphenyl)-4,5-dihydro-3-methyl-5-oxo-
 1H-pyrazol-4-yl]azo]-4-methyl- (9CI) (CA INDEX NAME)



IT 680588-18-5P 680588-19-6P 680588-58-3P
 RL: IMF (Industrial manufacture); TEM (Technical or engineered material
 use); PREP (Preparation); USES (Uses)
 (yellow dye; production of disperse azo coumarin dyes for polyester)
 RN 680588-18-5 CAPLUS
 CN 3-Pyridinecarbonitrile, 1-butyl-1,2-dihydro-6-hydroxy-4-methyl-5-[[4-
 methyl-2-oxo-2H-1-benzopyran-7-yl]azo]-2-oxo- (9CI) (CA INDEX NAME)

L4 ANSWER 3 OF 19 CAPLUS COPYRIGHT 2006 ACS on STN
 RN 2004:326194 CAPLUS
 DN 140:340751
 TI Coumarin disperse azo dyes, their production and their use
 PA Clariant International Ltd., Switz.
 SO Eur. Pat. Appl., 16 pp.
 CODEN: EPXKXW
 DT Patent
 LA English
 FAN.CNT 2

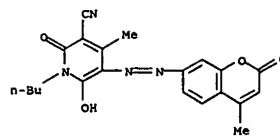
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI EP 1411089	A1	20040421	EP 2002-405894	20021018
R:	AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, SK			
WO 2004035690	A1	20040429	WO 2003-1B4611	20031017
W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MY, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SV, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW			
RW:	GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG			
EP 1556444	A1	20050727	EP 2003-751144	20031017
R:	AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK			
BR 2003015494	A	20050823	BR 2003-15494	20031017
JP 2006503151	T2	20060126	JP 2004-544616	20031017
PRAI EP 2002-405894	A	20021018		
GB 2002-24513	A	20021022		
WO 2003-1B4611	W	20031017		
OS MARFAT 140:340751				
GI				



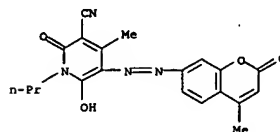
AB The invention relates to new azo dyes (I; X = H, Cl, Br, CN, SO₂Me, OH, OMe, NO₂; Y = H, Cl, Br, Cl; Z = coupling component group), their production and their use in dyeing and jet and hot-melt printing. I are suited for application to hydrophobic and synthetic textiles with good fastness. In an example, 7-amino-4-methylcoumarin-1-butyl-3-cyano-6-hydroxy-4-methyl-2-pyridone was prepared and applied to polyester to provide a fast yellow shade.

IT 680588-20-9 680588-21-0 680588-22-1
 680588-23-2 680588-24-3 680588-25-4

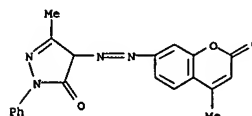
L4 ANSWER 2 OF 19 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)



RN 680588-19-6 CAPLUS
 CN 3-Pyridinecarbonitrile,
 1,2-dihydro-6-hydroxy-4-methyl-5-[[4-methyl-2-oxo-
 2H-1-benzopyran-7-yl]azo]-2-oxo-1-propyl- (9CI) (CA INDEX NAME)



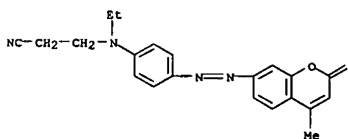
RN 680588-58-3 CAPLUS
 CN 2H-1-Benzopyran-2-one,
 7-[[4,5-dihydro-3-methyl-5-oxo-1-phenyl-1H-pyrazol-
 4-yl]azo]-4-methyl- (9CI) (CA INDEX NAME)



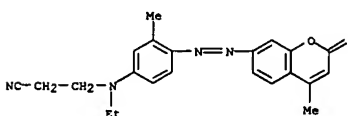
RE.CNT 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 3 OF 19 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)

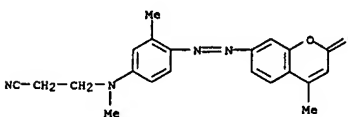
680588-26-5 680588-27-6 680588-28-7
 680588-29-8 680588-30-1 680588-31-2
 680588-49-2 680588-50-5 680588-51-6
 680588-52-7 680588-53-8 680588-54-9
 680588-55-0 680588-56-1 680588-57-2
 680996-18-3
 RL: TEM (Technical or engineered material use); USES (Uses)
 (dye; prodn. of coumarin disperse azo dyes and their use on polyester)
 RN 680588-20-9 CAPLUS
 CN Propanenitrile, 3-[ethyl[4-[(4-methyl-2-oxo-2H-1-benzopyran-7-yl)azo]phenyl]amino]- (9CI) (CA INDEX NAME)



RN 680588-21-0 CAPLUS
 CN Propanenitrile, 3-[methyl[3-methyl-4-[(4-methyl-2-oxo-2H-1-benzopyran-7-yl)azo]phenyl]amino]- (9CI) (CA INDEX NAME)

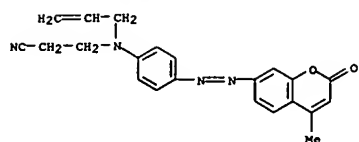


RN 680588-22-1 CAPLUS
 CN Propanenitrile, 3-[methyl[3-methyl-4-[(4-methyl-2-oxo-2H-1-benzopyran-7-yl)azo]phenyl]amino]- (9CI) (CA INDEX NAME)

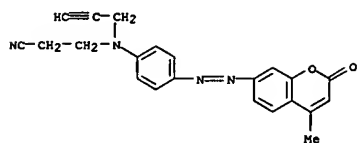


RN 680588-23-2 CAPLUS
 CN Propanenitrile,
 3-[4-[(4-methyl-2-oxo-2H-1-benzopyran-7-yl)azo]phenyl]-2-
 propenylamino]- (9CI) (CA INDEX NAME)

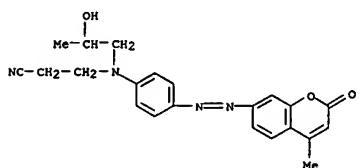
L4 ANSWER 3 OF 19 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)



RN 680588-24-3 CAPLUS
CN Propanenitrile,
3-[[4-[(4-methyl-2-oxo-2H-1-benzopyran-7-yl)azo]phenyl]-2-propynylamino]- (9CI) (CA INDEX NAME)

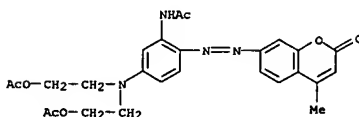


RN 680588-25-4 CAPLUS
CN Propanenitrile,
3-[(2-hydroxypropyl)[4-[(4-methyl-2-oxo-2H-1-benzopyran-7-yl)azo]phenyl]amino]- (9CI) (CA INDEX NAME)

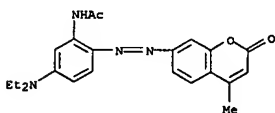


RN 680588-26-5 CAPLUS
CN 2H-1-Benzopyran-2-one, 7-[[4-[[bis[2-(acetyloxy)ethyl]amino]phenyl]azo]-4-methyl]- (9CI) (CA INDEX NAME)

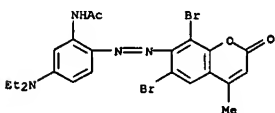
L4 ANSWER 3 OF 19 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)



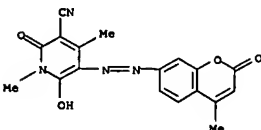
RN 680588-30-1 CAPLUS
CN Acetamide, N-[5-[(diethylamino)-2-[(4-methyl-2-oxo-2H-1-benzopyran-7-yl)azo]phenyl]- (9CI) (CA INDEX NAME)



RN 680588-31-2 CAPLUS
CN Acetamide, N-[2-[(6,8-dibromo-4-methyl-2-oxo-2H-1-benzopyran-7-yl)azo]-5-(diethylamino)phenyl]- (9CI) (CA INDEX NAME)

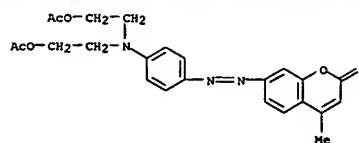


RN 680588-49-2 CAPLUS
CN 3-Pyridinecarbonitrile,
1,2-dihydro-6-hydroxy-4-methyl-5-[(4-methyl-2-oxo-2H-1-benzopyran-7-yl)azo]-2-oxo- (9CI) (CA INDEX NAME)

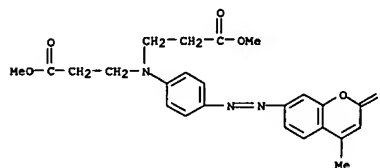


RN 680588-50-5 CAPLUS
CN 3-Pyridinecarbonitrile, 1-ethyl-1,2-dihydro-6-hydroxy-4-methyl-5-[(4-methyl-2-oxo-2H-1-benzopyran-7-yl)azo]-2-oxo-1-(phenylmethyl)- (9CI) (CA INDEX NAME)

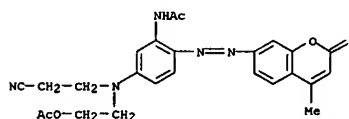
L4 ANSWER 3 OF 19 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)



RN 680588-27-6 CAPLUS
CN 3-Pyridinecarbonitrile, 1-(3-methoxy-3-oxopropyl)-N-[4-[(4-methyl-2-oxo-2H-1-benzopyran-7-yl)azo]phenyl]-, methyl ester (9CI) (CA INDEX NAME)

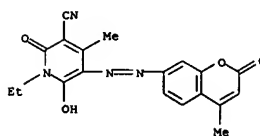


RN 680588-28-7 CAPLUS
CN Acetamide, N-[5-[(2-(acetyloxy)ethyl)[2-cyanoethyl]amino]-2-[(4-methyl-2-oxo-2H-1-benzopyran-7-yl)azo]phenyl]- (9CI) (CA INDEX NAME)

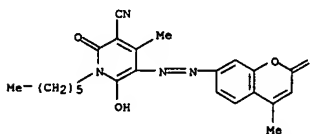


RN 680588-29-8 CAPLUS
CN Acetamide, N-[5-[[bis[2-(acetyloxy)ethyl]amino]-2-[(4-methyl-2-oxo-2H-1-benzopyran-7-yl)azo]phenyl]- (9CI) (CA INDEX NAME)

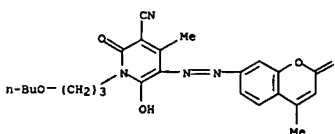
L4 ANSWER 3 OF 19 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)



RN 680588-51-6 CAPLUS
CN 3-Pyridinecarbonitrile, 1-hexyl-1,2-dihydro-6-hydroxy-4-methyl-5-[(4-methyl-2-oxo-2H-1-benzopyran-7-yl)azo]-2-oxo- (9CI) (CA INDEX NAME)

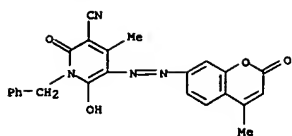


RN 680588-52-7 CAPLUS
CN 3-Pyridinecarbonitrile,
1-(3-butoxypropyl)-1,2-dihydro-6-hydroxy-4-methyl-5-[(4-methyl-2-oxo-2H-1-benzopyran-7-yl)azo]-2-oxo- (9CI) (CA INDEX NAME)

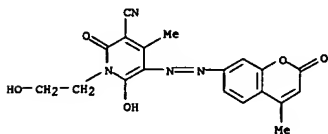


RN 680588-53-8 CAPLUS
CN 3-Pyridinecarbonitrile,
1,2-dihydro-6-hydroxy-4-methyl-5-[(4-methyl-2-oxo-2H-1-benzopyran-7-yl)azo]-2-oxo-1-(phenylmethyl)- (9CI) (CA INDEX NAME)

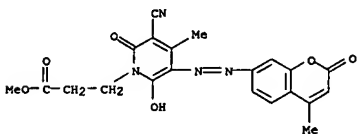
L4 ANSWER 3 OF 19 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)



RN 680588-54-9 CAPLUS
 CN 3-Pyridinecarbonitrile,
 1,2-dihydro-6-hydroxy-1-(2-hydroxyethyl)-4-methyl-
 5-[(4-methyl-2-oxo-2H-1-benzopyran-7-yl)azo]-2-oxo- (9CI) (CA INDEX NAME)

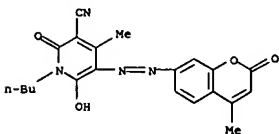


RN 680588-55-0 CAPLUS
 CN 1(2H)-Pyridinepropanoic acid, 3-cyano-6-hydroxy-4-methyl-5-[(4-methyl-2-oxo-2H-1-benzopyran-7-yl)azo]-2-oxo-, methyl ester (9CI) (CA INDEX NAME)

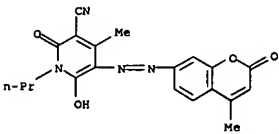


RN 680588-56-1 CAPLUS
 CN 1(2H)-Pyridineacetic acid, 3-cyano-6-hydroxy-4-methyl-5-[(4-methyl-2-oxo-2H-1-benzopyran-7-yl)azo]-2-oxo-, methyl ester (9CI) (CA INDEX NAME)

L4 ANSWER 3 OF 19 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)

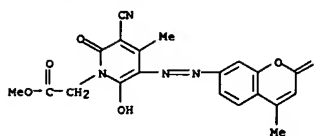


RN 680588-19-6 CAPLUS
 CN 3-Pyridinecarbonitrile,
 1,2-dihydro-6-hydroxy-4-methyl-5-[(4-methyl-2-oxo-2H-1-benzopyran-7-yl)azo]-2-oxo-1-propyl- (9CI) (CA INDEX NAME)

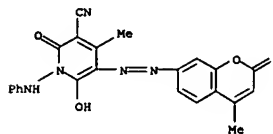


RE.CNT 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

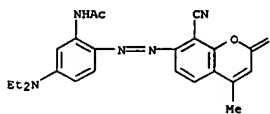
L4 ANSWER 3 OF 19 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)



RN 680588-57-2 CAPLUS
 CN 3-Pyridinecarbonitrile,
 1,2-dihydro-6-hydroxy-4-methyl-5-[(4-methyl-2-oxo-2H-1-benzopyran-7-yl)azo]-2-oxo-1-(phenylamino)- (9CI) (CA INDEX NAME)



RN 680996-18-3 CAPLUS
 CN Acetamide, N-[2-[(8-cyano-4-methyl-2-oxo-2H-1-benzopyran-7-yl)azo]-5-(diethylamino)phenyl]- (9CI) (CA INDEX NAME)



IT 680588-18-5P 680588-19-6P
 RI: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
 (yellow dye; production of coumarin disperse azo dyes and their use on polyester)
 RN 680588-18-5 CAPLUS
 CN 3-Pyridinecarbonitrile, 1-butyl-1,2-dihydro-6-hydroxy-4-methyl-5-[(4-methyl-2-oxo-2H-1-benzopyran-7-yl)azo]-2-oxo- (9CI) (CA INDEX NAME)

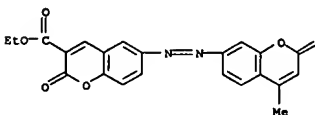
L4 ANSWER 4 OF 19 CAPLUS COPYRIGHT 2006 ACS on STN

AN 2003:101318 CAPLUS
 DN 138:368715
 TI Synthesis and structural characterization of new 3-substituted-6-arylazocoumarins
 AU Sun, Yi-Feng; Song, Hua-Can; Sun, Xian-Zhong; Xu, Zun-Le
 CS School of Chemistry and Chemical Engineering, Zhongshan University, Canton, 510275, Peop. Rep. China
 SO Youji Huaxue (2003), 23(2), 162-166
 CODEN: YCHHDX; ISSN: 0253-2786
 PB Kexue Chubanshe
 DT Journal
 LA Chinese
 OS CASREACT 138:368715
 AB A series of new azocoumarins have been synthesized in 44.1% .apprx. 81.9% yields. For example, refluxing 2-hydroxy-5-[(4-nitrophenyl)azo]benzaldehyde with di-Et malonate in EtOH in the presence of piperidine for 5 h gave 49.3% Et 6-[(4-nitrophenyl)azo]coumarin-3-carboxylate (I). Their structures were established on the basis of IR,

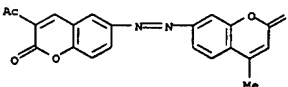
¹H NMR, MS and elemental analyses. The crystal structure of I was determined. The double function of I, trans-cis isomerization of the azo group, and the torsion angle between the benzene and the coumarin ring suggested that azocoumarins might be useful as efficient mol. devices.

IT 524016-76-4P 524016-76-0P
 RI: SPN (Synthetic preparation); PREP (Preparation)
 (synthesis and structural characterization of 3-substituted-6-arylazocoumarins)

RN 524016-62-4 CAPLUS
 CN 2H-1-Benzopyran-3-carboxylic acid, 6-[(4-methyl-2-oxo-2H-1-benzopyran-7-yl)azo]-2-oxo-, ethyl ester (9CI) (CA INDEX NAME)



RN 524016-76-0 CAPLUS
 CN 2H-1-Benzopyran-2-one, 3-acetyl-6-[(4-methyl-2-oxo-2H-1-benzopyran-7-yl)azo]- (9CI) (CA INDEX NAME)



L4 ANSWER 5 OF 19 CAPLUS COPYRIGHT 2006 ACS on STN
 AN 2002:794244 CAPLUS
 DN 137:291300
 TI Separating components of biological samples
 IN Chapman, William H.; Klevan, Leonard
 PA USA
 SO U.S. Pat. Appl. Publ., 12 pp., Cont.-in-part of U.S. Ser. No. 802,381.
 CODEN: USXXCO
 DT Patent
 LA English
 FAN.CNT 2

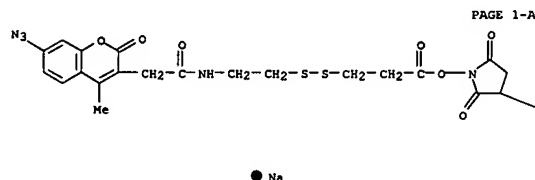
	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PT	US 2002151089	A1	20021017	US 2002-72295	20020205
PRAI	US 1999-154148P	P	19990915		
	US 2001-802381	A2	20010416		

AB Methods, comps. and systems for processing biol. samples include separation reagents featuring a microparticle and a receptor for a ligand on a target species in the biol. sample. The biol. sample is reacted with the separation reagent to capture the target species. A covalent bond is formed between the target species and the separation reagent to form an adduct. The adduct is separated from the biol. sample, and a component of the target species is separated from the target species.

IT 139609-20-4
 RL: NUU (Other use, unclassified); USES (Uses)
 (separating components of biol. samples)

RN 139609-20-4 CAPLUS

CN 3-Pyrrolidinesulfonic acid, 1-[3-[[[2-[[[7-azido-4-methyl-2-oxo-2H-1-benzopyran-3-yl]acetyl]amino]ethyl]dithio]-1-oxopropoxy]-2,5-dioxo-, monosodium salt (9CI) (CA INDEX NAME)

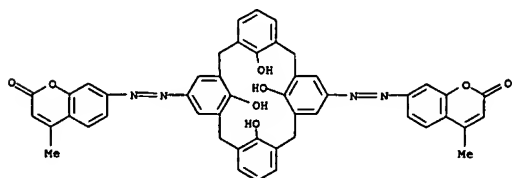


L4 ANSWER 6 OF 19 CAPLUS COPYRIGHT 2006 ACS on STN
 AN 2002:722184 CAPLUS
 DN 138:69271
 TI Detection of trace CuII by a designed calix[4]arene based fluorescent reagent
 AU Ma, Huimin; Ma, Quanli; Su, Meihong; Nie, Lihua; Han, Huiwan; Xiong, Shaoxiang; Xin, Bin; Liu, Guoquan
 CS Chinese Academy of Sciences, Institute of Chemistry, Center for Molecular Sciences, Beijing, 100080, Peop. Rep. China
 SO New Journal of Chemistry (2002), 26(10), 1456-1460
 CODEN: NJCHE5; ISSN: 1144-0546
 PB Royal Society of Chemistry
 DT Journal
 LA English
 AB A highly Cu2+ selective calix[4]arene based fluorescent reagent, 5,17-bis(4-methylcoumarin-7-azo)-25,26,27,28-tetrahydroxycalix[4]arene, has been designed, synthesized and evaluated. The reagent exhibits excellent selectivity for Cu2+ over a wide range of alkali, alkaline earth and other transition metal ions. Quenching of its fluorescence due to a strong Cu2+ affinity, induced binding and selective redox reaction is not influenced by the presence of 20- to 10000-fold excesses of Al3+, Ca2+, Cd2+, Co2+, Cr3+, Hg2+, K+, Mg2+, Mn2+, NH4+, Ni2+, Pb2+, Zn2+, Cl-, NO3-, CO32-, SO42- or PO43-. Furthermore, with this fluorescent reagent a simple, sensitive and highly selective method has been developed for measuring trace Cu2+ in real biol. fluids. The combination of multiple selective responses presented here may provide a useful design strategy for preparing selective reagents of other species.

IT 481047-52-3P 481047-53-4P
 RL: ARU (Analytical role, unclassified); SPN (Synthetic preparation); ANST (Analytical study); PREP (Preparation)
 (trace CuII determination by designed calix[4]arene based fluorescent reagent)

RN 481047-52-3 CAPLUS

CN 2H-1-Benzopyran-2-one, 7-[(4-hydroxy-3,5-dimethylphenyl)azo]-4-methyl-7,7'-[(25,26,27,28-tetrahydroxypentacyclo[19.3.1.13.7.19.13.115,19]octacos-1(25),3,5,7(28),9,11,13(27),15,17,19(26),21,23-dodecaene-5,17-diyl)bis(azo)]bis[4-methyl- (9CI) (CA INDEX NAME)



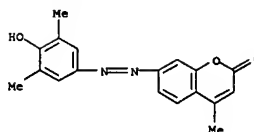
RN 481047-53-4 CAPLUS
 CN 2H-1-Benzopyran-2-one, 7-[(4-hydroxy-3,5-dimethylphenyl)azo]-4-methyl- (9CI) (CA INDEX NAME)

L4 ANSWER 5 OF 19 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)

PAGE 1-B

SO3H

L4 ANSWER 6 OF 19 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)



RE.CNT 49 THERE ARE 49 CITED REFERENCES AVAILABLE FOR THIS RECORD
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 7 OF 19 CAPLUS COPYRIGHT 2006 ACS ON STN
 AN 2002:229525 CAPLUS
 DN 136:382380
 TI Identification of components of protein complexes using a fluorescent photo-cross-linker and mass spectrometry
 AU Wine, Robert N.; Dial, John M.; Tomer, Kenneth B.; Borchers, Christoph H.
 CS Laboratory of Toxicology and Laboratory of Structural Biology, National Institute of Environmental Health Sciences/NIH, Research Triangle Park, NC, 27713, USA
 SO Analytical Chemistry (2002), 74(9), 1939-1945
 CODEN: ANCHAM; ISSN: 0003-2700
 PB American Chemical Society
 DT Journal
 LA English

AB This study describes a novel method for improving the specific recognition, detection, and identification of proteins involved in multiprotein complexes. The method is based on a combination of coimmunoprecipitation, chemical crosslinking, and specific fluorescent tagging of protein components in close association with one another. Specific fluorescent tagging of the protein complex components was achieved using the cleavable, fluorescent cross-linker sulfoxuccinimidyl 2-((7-azido-4-methylcoumarin-3-acetamido) ethyl)-1,3'-dithiopropionate (SAED). Following dissociation and separation by SDS-PAGE, the

fluorescently tagged proteins are then visualized by UV illumination, excised, and, following in-gel digestion, identified by mass spectrometry. In this study, a complex of the HIV-envelope protein gp120 and its cellular receptor CD4 was used as a model system. The sensitivity of detection of fluorescent SAED-labeled proteins in SDS gels, and the sensitivity of the mass spectrometric identification of fluorescent proteins after in-gel digestion, is in the range of a few hundred femtomoles of protein. This sensitivity is comparable to that achieved with silver-staining techniques, but fluorescence detection is protein independent and no background interference occurs. Furthermore, fluorescence labeling is significantly more compatible with mass spectrometric identification of proteins than is silver staining. The first application of this strategy was in the investigation of the mechanism of spermiogenesis, the process by which mature spermatids separate from Sertoli cells. For the coimmunoprecipitation experiment, an antibody against paxillin, a protein involved in spermatid-Sertoli cell junctional complexes, was used. More components

of the paxillin protein complex were visible by fluorescence detection of SAED-labeled proteins than were visible on comparable silver-stained gels.

Mass spectrometric anal. of the fluorescently labeled proteins identified integrin $\alpha 6$ precursor as a protein associated in a complex with paxillin. The identification of integrin $\alpha 6$ precursor was confirmed by Western blot anal. and verifies the applicability of this novel approach for identifying proteins involved in protein complexes.

IT 139609-20-4
 RI: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses) (identification of components of protein complexes using a fluorescent photo-cross-linker and mass spectrometry)

RN 139609-20-4 CAPLUS
 CN 3-Pyrrolidinesulfonic acid, 1-[3-[[[2-[[[7-azido-4-methyl-2-oxo-2H-1-benzopyran-3-yl]acetyl]amino]ethyl]dithio]-1-oxopropoxy]-2,5-dioxo-, monosodium salt (9CI) (CA INDEX NAME)

L4 ANSWER 8 OF 19 CAPLUS COPYRIGHT 2006 ACS ON STN
 AN 2002:9050 CAPLUS
 DN 136:146111
 TI Method for determining mRNA tissue distribution using restriction endonuclease digestion and PCR amplification for database indexing and drug screening
 IN Hilbush, Brian S.; Hasel, Karl W.; Sutcliffe, J. Gregor; Chang, Hwai Wen; Callahan, Marie Lei A.; Quan, Jeanette
 PA USA
 SO U.S. Pat. Appl. Publ., 41 pp., Cont.-in-part of U.S. Ser. No. 186,869.
 DT Patent
 LA English
 FAN.CNT 2

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2002012922	A1	20020131	US 2001-775217	20010201
WO 2000026406	A1	20000511	WO 1999-US23655	19991014
W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, GR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, GM, KZ, MD, RU, TJ, TM RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG WO 2002061045 A2 20020808 WO 2002-US2666 20020201 WO 2002061045 A3 20040212				
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
PRAI US 1998-186869	A2	19981104		
WO 1999-US23655	W	19991014		
US 2001-775217	A	20010201		

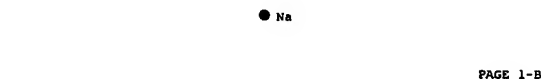
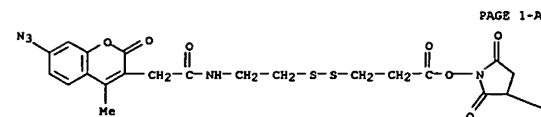
AB An simplified method for the simultaneous sequence-specific identification

of mRNA in a mRNA population allowing the visualization of nearly every mRNA expressed by a tissue as a distinct band on a gel whose intensity corresponds roughly to the concentration of the mRNA without the need to prepare

libraries is described. In general, the method comprises the formation of cDNA using anchor primers to fix a 3'-endpoint, ligating the cDNA to an adaptor containing a bacteriophage-specific promoter for subsequent RNA synthesis, generating linearized fragments of the cloned inserts by restriction endonuclease digestion, preparing cRNA, transcribing cDNA

from the cRNA, and performing two sequence-specific PCR amplifications of the cDNA. The products of the second PCR amplification step are resolved by gel electrophoresis to obtain the length and the amount of each. In preferred embodiments, the method comprises comparing the length and at least part of the nucleotide sequence of the PCR products to expected values determined from a database of nucleotide sequences. Such database

L4 ANSWER 7 OF 19 CAPLUS COPYRIGHT 2006 ACS ON STN (Continued)

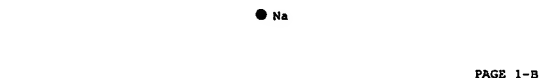
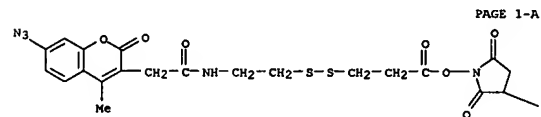


RE.CNT 26 THERE ARE 26 CITED REFERENCES AVAILABLE FOR THIS RECORD
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 8 OF 19 CAPLUS COPYRIGHT 2006 ACS ON STN (Continued)
 contg. information on mRNA sequences, gene mapping, and cellular distribution is further claimed. The method can identify changes in expression of mRNA assoc. with the administration of drugs or with physiol. or pathol. conditions. Also provided are vectors, host cells, and primers useful for the practice of the improved method. The primers are preferably labeled and contain phosphorothioate linkages. Two mRNA samples from serum-starved and serum-added human MG63 osteosarcoma cells were analyzed by the method of this invention with results showing significant improvement over the previous method using only one PCR step.
 IT 139609-20-4 216309-04-5
 RI: MOD (Modifier or additive use); RCT (Reactant); RACT (Reactant or reagent); USES (Uses) (immobilization of nucleic acids using; method for determining mRNA

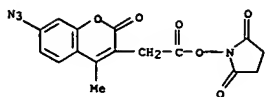
tissue distribution using restriction endonuclease digestion and PCR amplification for database indexing and drug screening)

RN 139609-20-4 CAPLUS
 CN 3-Pyrrolidinesulfonic acid, 1-[3-[[[2-[[[7-azido-4-methyl-2-oxo-2H-1-benzopyran-3-yl]acetyl]amino]ethyl]dithio]-1-oxopropoxy]-2,5-dioxo-, monosodium salt (9CI) (CA INDEX NAME)

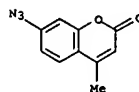


RN 216309-04-5 CAPLUS
 CN 1-[[[7-azido-4-methyl-2-oxo-2H-1-benzopyran-3-yl]acetyl]oxy]-2,5-dioxo-, sodium salt (9CI) (CA INDEX NAME)

L4 ANSWER 10 OF 19 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)



L4 ANSWER 11 OF 19 CAPLUS COPYRIGHT 2006 ACS on STN
 AN 1999:709639 CAPLUS
 DN 132:46766
 TI Photoaffinity labeling probe for the substrate binding site of human phenol sulfotransferase (SULT1A1): 7-Azido-4-methylcoumarin
 AU Chen, Guangping; Battaglia, Eric; Senay, Claire; Falany, Charles N.; Radominska-Pandya, Anna
 CS Department of Biochemistry and Molecular Biology, University of Arkansas for Medical Sciences, Little Rock, AR, 72203, USA
 SO Protein Science (1999), 8(10), 2151-2157
 CODEN: PRSIEL; ISSN: 0961-8368
 PB Cambridge University Press
 DT Journal
 LA English
 AB A novel fluorescent photoactive probe 7-azido-4-methylcoumarin (AzMC) has been characterized for use in photoaffinity labeling of the substrate binding site of human phenol sulfotransferase (SULT1A1 or P-PST-1). For the photoaffinity labeling expts., SULT1A1 cDNA was expressed in *Escherichia coli* as a fusion protein to maltose binding protein (MBP) and purified to apparent homogeneity over an amylose column. The maltose moiety was removed by Factor Xa cleavage. Both MBSULT1A1 and SULT1A1 were efficiently photolabeled with AzMC. This labeling was concentration dependent. In the absence of light, AzMC competitively inhibited the sulfation of 4MU catalyzed by SULT1A1 ($K_i = 0.47 \pm 0.05$ mM). Moreover, enzyme activity toward 2-naphthol was inactivated in a time- and concentration-dependent manner. SULT1A1 inactivation by AzMC was protected by substrate but was not protected by cosubstrate. These results indicate that photoaffinity labeling with AzMC is highly suitable for the identification of the substrate binding site of SULT1A1. Further studies are aimed at identifying which amino acids modified by AzMC are localized in the binding site.
 IT 95633-27-5P
 RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation)
 (7-azido-4-methylcoumarin as photoaffinity labeling probe for substrate binding site of human phenol sulfotransferase (SULT1A1))
 RN 95633-27-5 CAPLUS
 CN 2H-1-Benzopyran-2-one, 7-azido-4-methyl- (9CI) (CA INDEX NAME)

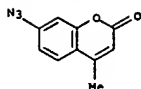


RE.CMT 42 THERE ARE 42 CITED REFERENCES AVAILABLE FOR THIS RECORD
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 11 OF 19 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)

L4 ANSWER 12 OF 19 CAPLUS COPYRIGHT 2006 ACS on STN
 AN 1999:452490 CAPLUS
 DN 131:268888
 TI Photoaffinity Labeling of the Aglycon Binding Site of the Recombinant Human Liver UDP-Glucuronosyltransferase UGT1A6 with 7-Azido-4-methylcoumarin
 AU Senay, Claire; Battaglia, Eric; Chen, Guangping; Breton, Robert; Fournel-Gigleux, Sylvie; Magdelou, Jacques; Radominska-Pandya, Anna
 CS Department of Biochemistry and Molecular Biology, University of Arkansas for Medical Sciences, Little Rock, AR, 72203, USA
 SO Archives of Biochemistry and Biophysics (1999), 368(1), 75-84
 CODEN: ABBIA4; ISSN: 0003-9861
 PB Academic Press
 DT Journal
 LA English
 AB 7-Azido-4-methylcoumarin (AzMC) is a fluorescent photoactive compound structurally related to 4-methylumbelliferone (4-MU), a marker substrate of the human liver recombinant UDP-glucuronosyltransferase (UGT) 1A6. AzMC was synthesized and utilized to label the substrate binding site of UGT1A6. AzMC exhibits a fluorescence spectrum with maximum excitation and emission wavelengths of 380 and 442 nm, resp. Upon irradiation, the probe irreversibly inhibited glucuronidation activity measured with para-nitrophenol (pNP) as substrate and interacted with UGT1A6 according to a saturable process indicative of reversible binding before covalent incorporation of the photoaffinity label. This inhibition was both time and concentration dependent and led to the calcul. of an inhibition constant, $K_2 = 0.113$ mM min⁻¹, and dissociation constant, $K_d = 2.89$ mM, for the reaction. Partial photoinactivation of UGT1A6 with AzMC revealed that the probe decreased the apparent V_{max} of the pNP glucuronidation reaction, but not the K_m . Moreover, inhibition was partially prevented by 1-naphthol, a surrogate substrate for the enzyme, or by preincubation with an active-site directed inhibitor, 5'-O-[(2-decanoylamino-3-phenylpropyl)oxycarbonyl]aminol-sulfonyl-2',3'-O-isopropylideneuridine. In contrast, UDP-glucuronic acid (UDP-GlcUA) did not have any protective effect against photoinactivation and AzMC did not affect the photoaffinity labeling of UGT1A6 by 5-[(β -32P)N3UDP-GlcUA], a photoaffinity analog of UDP-GlcUA. Addnl., in the absence of irradiation, AzMC was found to be a competitive inhibitor of 4MU glucuronidation. Collectively, these results strongly indicate that AzMC specifically binds to the UGT1A6 aglycon binding site. Amino acid alignment of phenol-binding proteins revealed a conserved motif, YXXXXXXFPX. It is possible that this motif is involved in phenol binding to UGT1A6 and other phenol-accepting proteins. (C)
 1999
 Academic Press.
 IT 95633-27-5P
 RL: BUU (Biological use, unclassified); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); USES (Uses)
 (photoaffinity labeling of aglycon binding site of recombinant human liver UDP-glucuronosyltransferase UGT1A6 with 7-azido-4-methylcoumarin)
 RN 95633-27-5 CAPLUS
 CN 2H-1-Benzopyran-2-one, 7-azido-4-methyl- (9CI) (CA INDEX NAME)

L4 ANSWER 12 OF 19 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)

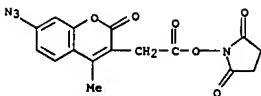
RE.CMT 41 THERE ARE 41 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 13 OF 19 CAPLUS COPYRIGHT 2006 ACS on STN

AN 1997:757205 CAPLUS
 DN 128:45586
 TI Antibodies directed against dithiocarbamates
 IN Lai, Ching San
 PA Medinox, Inc., USA; Lai, Ching-San
 SO PCT Int. Appl., 31 pp.
 CODEN: PIXXD2
 DT Patent
 LA English
 FAN.CMT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9743645	A1	19971120	WO 1997-US7380	19970501
W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, HU, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM RW: GH, KE, LS, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NZ, SN, TD, TG				
US 5869348	A	19990209	US 1996-644961	19960515
AU 9727503	A1	19971205	AU 1997-27503	19970501
PRAI US 1996-644961	A1	19960515		
WO 1997-US7380	W	19970501		
OS MARPAT 128:45586				
AB In accordance with the present invention, ELISA methods for the measurement of NO levels in mammalian body fluids utilizing monoclonal antibodies directed against dithiocarbamates and related iron complexes are described. It has been found that conjugation of dithiocarbamates to a macromol. produces immunogenic dithiocarbamate-macromol. deriva. Such deriva. can be used for the production (e.g., in rodents) of monoclonal antibodies directed against different forms of dithiocarbamates (e.g., free dithiocarbamates, as well as complexes thereof with iron and, optionally, nitric oxide). In contrast, non-derivatized dithiocarbamates alone are not immunogenic. The simple, easy and non-invasive ELISA methods for measurement of NO levels in body fluids will find a variety of uses, e.g., for diagnosis and monitoring of NO overprodn. that has been associated with many inflammatory and infectious diseases.				
IT 199804-24-5 RL: RCT (Reactant); THU (Therapeutic use); BIOL (Biological study); RACT (Reactant or reagent); USES (Uses) (photoreactive crosslinking agent; antibodies directed against dithiocarbamates)				
RN 199804-24-5 CAPLUS CN 2,5-pyrrolidinedione, 1-[[[(7-azido-4-methyl-2-oxo-2H-1-benzopyran-3-yl)acetyl]oxy]- (9CI) (CA INDEX NAME)				

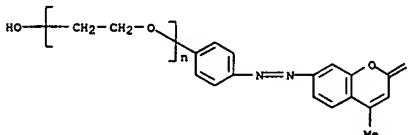
L4 ANSWER 13 OF 19 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)



L4 ANSWER 14 OF 19 CAPLUS COPYRIGHT 2006 ACS on STN

AN 1995:794902 CAPLUS
 DN 123:183661
 TI Functional thin film, production and application thereof
 IN Saji, Tetsuo
 PA Dainichiseika Color Chem., Japan
 SO Jpn. Kokai Tokkyo Koho, 41 pp.
 CODEN: JYOXAF
 DT Patent
 LA Japanese
 FAN.CMT 1

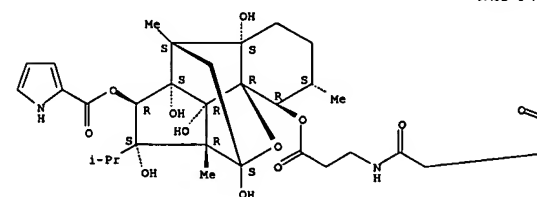
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 07062594	A2	19950307	JP 1993-234301	19930827
JP 2825424	B2	19981118		
PRAI JP 1993-234301		19930827		
AB The title film, useful for a color filter, electrophotog. device, photosensor, solar cell, electroluminescence device, optical recording device, optical nonlinear device, optoelectronic device, photochromic film, electrochromic film, gas sensor and ion sensor, is prepared by an electrochem. reduction of a surfactant containing an aromatic azo residue, dispersed in a water or water containing solvent. The title method requires min. zero use of binder resin.				
IT 167857-44-5 RL: DEV (Device component use); USES (Uses) (functional thin film prepared by photochem. reduction of surfactant containing aromatic azo residue)				
RN 167857-44-5 CAPLUS CN Poly(oxy-1,2-ethanediyl), α -[4-[(3-methyl-2-oxo-2H-1-benzopyran-7-yl)azo]phenyl]- α -hydroxy- (9CI) (CA INDEX NAME)				



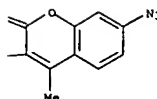
L4 ANSWER 15 OF 19 CAPLUS COPYRIGHT 2006 ACS on STN
 RN 1994:695254 CAPLUS
 DN 121:295254
 TI High affinity C10-Oeq ester derivatives of ryanodine: activator-selective agonists of the sarcoplasmic reticulum calcium release channel
 AU Humerickhouse, Rod A.; Bidasee, Keshore R.; Gerzon, Koert; Emmick, Jeffrey
 CS T.; Kwon, Sangyeol; Sutko, John L.; Ruest, Luc; Besch, Henry R, Jr.
 Dep. Pharmacology and Toxicology, Indiana Univ. Sch. Med., Indianapolis, IN, 46202, USA
 SO Journal of Biological Chemistry (1994), 269(48), 30243-53
 CODEN: JBCN93; ISSN: 0021-9258
 PB American Society for Biochemistry and Molecular Biology
 DT Journal
 LA English
 AB The plant alkaloids ryanodine and dehydroryanodine are specific and potent modulators of the sarcoplasmic reticulum calcium release channel. In the present study, acidic, basic, and neutral side chains esters of these diterpene compds. were prepared and their pharmacol. activities were assessed. Binding affinities of the novel C10-Oeq ester derivs. for the sarcoplasmic reticulum Ca2+-release channel were evaluated with sarcoplasmic reticular vesicles prepared from rabbit skeletal muscle. Kd values of the derivs. varied 500-fold, ranging from 0.5 to 244 nM. In comparison, Kd values for ryanodine and dehydroryanodine were 4.4 nM and 5.4 nM, resp. Basic substituents at the C10-Oeq side chain terminus produced the highest affinity derivs. (Kd values from 0.5 to 1.3 nM). Neutral and/or hydrophobic side chain derivs. exhibited intermediate affinities for the high affinity ryanodine receptor site (Kd values from 2.5 to 39 nM), whereas a derivative with a terminal acidic group had the lowest affinity (Kd value > 100 nM). Certain of the higher affinity C10-Oeq derivs. were evaluated more extensively for their pharmacol. activity on the sarcoplasmic reticular Ca2+ release channel. Both activating (opening) and deactivating (closing) actions were assessed from the ability of the ryanoids to alter Ca2+ efflux rates from skeletal junctional sarcoplasmic reticular vesicles that had been passively loaded with Ca2+. The natural Ryania secondary metabolites ryanodine, dehydroryanodine and esters E and F, all exhibit antithetical concentration-effect curves, indicating both activator and deactivator actions. In contrast, the semi-synthetic C10-Oeq esters selectively activate the Ca2+ release channel. Half-maximal concns. for such activation (EC50act) ranged from 0.87 μ M to 4.2 μ M, compared with an EC50act of 1.3 μ M for ryanodine. These derivs. were also evaluated for their ability to augment ATP-dependent Ca2+ accumulation by cardiac junctional sarcoplasmic reticular vesicles, an effect that results from deactivation of the Ca2+ release channels. None of the derivs. tested were able to significantly augment Ca2+ accumulation, further substantiating their ability to deactivate the sarcoplasmic reticular Ca2+ release channel. Adnln., these derivs. functionally antagonized the action of ryanodine to close the Ca2+ release channel. The results presented demonstrate that these C10-Oeq ester derivs. of ryanodine and dehydroryanodine bind specifically to the

L4 ANSWER 15 OF 19 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)

L4 ANSWER 15 OF 19 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)
 SR Ca2+ release channel, selectively activate the channel, and although they fail to effect channel closure, they nevertheless functionally compete with ryanodine at its low affinity (deactivator) site(s).
 IT 159191-93-2P
 RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation)
 (preparation and activity of ryanodine ester derivative activator-selective agonists of sarcoplasmic reticulum calcium release channel)
 RN 159191-93-2 CAPLUS
 CN β -Alanine, N-[(7-azido-4-methyl-2-oxo-2H-1-benzopyran-3-yl)acetyl]-, 10-ester with ryanodol 3-(1H-pyrrole-2-carboxylate) (9CI) (CA INDEX NAME)
 Absolute stereochemistry.

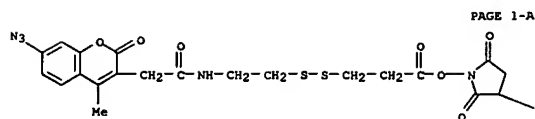


PAGE 1-B



L4 ANSWER 16 OF 19 CAPLUS COPYRIGHT 2006 ACS on STN
 RN 1993:228342 CAPLUS
 DN 118:228342
 TI The calcium channel of sarcoplasmic reticulum is regulated by conformational changes of the foot protein
 AU Kang, Jaw Jou; Ohkusa, Tomoko; Ikemoto, Noriaki
 CS Dep. Muscle Res., Boston Biomed. Res. Inst., Boston, MA, 02114, USA
 SO Recent Adv. Cell. Mol. Biol., World Congr. C.M.B., 1st (1992), Meeting Date 1991, Volume 4, 173-81. Editor(s): Wegmann, Raymond J.; Wegmann, Maria A. Publisher: Peeters Press, Leuven, Belg.
 CODEN: S8ROAA
 DT Conference
 LA English
 AB Ca2+ release from sarcoplasmic reticulum during excitation-contraction coupling is likely to be mediated by conformational changes in the foot protein of the triad vesicles. In order to monitor conformational changes of the foot protein, a new method was developed that permits specific fluorescent labeling of the protein in a site-directed fashion. A novel fluorescent cleavable photoaffinity crosslinking reagent, sulfo-succinimidyl 2-(7-azido-4-methyl-coumarin-3-acetamido)-ethyl-1,1,3'-dithiopropionate (SAED) was conjugated with site-directing carriers, polylysine (Ca2+ release inducer) and neomycin (Ca2+ release blocker). After covalent crosslinking by photolysis, the reagent was cleaved by reduction, and the carriers were removed from the vesicles. These procedures led to specific incorporation of the fluorophore, Me coumarin acetate (MCA), into the foot protein. The fluorescently labeled foot protein was purified and the effects of various Ca2+ release effectors on the fluorescence intensity were examined. Upon addition of ryanodine, the fluorescence of the MCA incorporated by mediation of neomycin carrier changed in parallel with activation and inhibition by ryanodine of Ca2+ efflux from SR; while the fluorescence of the MCA incorporated by mediation of polylysine carrier showed virtually no change. In contrast, the MCA fluorescence, regardless of the types of carriers used, showed similar [Ca2+]i-dependence, and changed in parallel to Ca2+ dependent activation and inhibition of Ca2+ efflux from SR. These results suggest that modulation of Ca2+ release by ryanodine involves a local conformational change of the foot protein, while its Ca2+-dependent activation and inhibition is controlled by a global conformational change. The thiol-reacting fluorescent probe N-(7-dimethylamino-4-methyl-4-coumarinyl) maleimide (DACH) was covalently attached to the foot protein at its transmembrane region. The fluorescence intensity of the protein-attached DACH showed rapid changes upon the addition of Ca2+ release triggers such as polylysine. The initial rate of Ca2+ release from the DACH-labeled SR showed a close correlation with the amplitude of the fluorescence change of the foot protein-attached DACH under variety of conditions, and the fluorescence change of the foot protein was always much faster than Ca2+ release. Apparently the binding of release triggering reagents to the foot protein induces a rapid conformational change, which in turn regulates Ca2+ release from SR.
 IT 139609-20-4
 RL: BIOL (Biological study)
 (fluorescent labeling by, of foot protein of sarcoplasmic reticulum, foot protein conformational changes in relation to)
 RN 139609-20-4 CAPLUS
 CN 3-Pyrrolidinesulfonic acid, 1-[3-[[[2-[[[7-azido-4-methyl-2-oxo-2H-1-benzopyran-3-yl]acetyl]amino]ethyl]di-thio]-1-oxopropoxy]-2,5-dioxo-, monosodium salt (9CI) (CA INDEX NAME)

L4 ANSWER 16 OF 19 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)



● Na

PAGE 1-B

-SO₃H

L4 ANSWER 17 OF 19 CAPLUS COPYRIGHT 2006 ACS on STN

AN 1992:443832 CAPLUS

DN 117:43832

TI A novel photoactivatable cross-linker for the functionally-directed region-specific fluorescent labeling of proteins

AU Thevenin, Bernard J. M.; Shahrokh, Zahra; Williard, Renee L.; Fujimoto, Edward K.; Kang, Jaw Jou; Ikemoto, Noriaki; Shohet, Stephen B.

CS Dep. Med., Univ. California, San Francisco, CA, 94143, USA

SO European Journal of Biochemistry (1992), 206(2), 471-7

CODEN: EJBICAI; ISSN: 0014-2956

DT Journal

LA English

AB A cleavable crosslinking reagent, sulfo-succinimidyl-2-(7-azido-4-methylcoumarin-3-acetamido)ethyl-1,3'-dithiopropionate (SAED), was synthesized for the selective transfer of a coumarin fluorophore from a donor protein to a position near the binding site of an interacting

target

protein. SAED contains a terminal N-sulfo-succinimidyl ester for conjugation to the donor, a terminal photoactivatable azido-coumarin species for crosslinking with the interacting target, and a central disulfide spacer for the release of the labeled target after cleavage.

To

evaluate the effectiveness of this labeling reagent, soybean trypsin inhibitor (STI) was derivatized (~0.5 mol/mol) with SAED and then photolyzed in the presence of trypsin. A single fluorescent cross-linked species (6-7 mol% of total STI) was observed by SDS/PAGE and, after

reductive

cleavage, was shown to be a 1:1 STI-trypsin complex. This complex was not

detected without photolysis or with an inactivated cross-linker. Importantly, complex formation was inhibited by an excess of unmodified STI and prevented by substitution of a non-interacting protein for trypsin. Cleavage of the cross-linked complex revealed that the trypsin, but not the STI, was fluorescent; the uncomplexed trypsin fraction remained unlabeled. These results demonstrated the specificity of the labeling of trypsin by fluorescent-transfer crosslinking with SAED. An efficiency of about 15% for this crosslinking mediated labeling of

trypsin

was calculated. The short crosslinking span of SAED (<1.8 nm) strictly limited the labeling to the vicinity of the contact region of trypsin

with

STI. Thus, this novel cross-linker permits the region-specific targeting of a fluorophore near a functionally important binding site.

IT

139609-20-4P

RL: PREP (Preparation)

(preparation of, as photoactivatable crosslinker for fluorescence

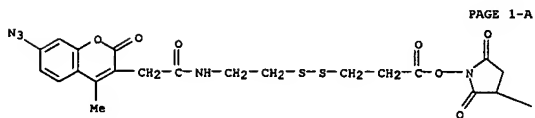
labeling

of proteins)

RN 139609-20-4 CAPLUS

CN 3-Pyrrolidinesulfonic acid, 1-[3-[[2-[[[7-azido-4-methyl-2-oxo-2H-1-benzopyran-3-yl]acetyl]amino]ethyl]dithio]-1-oxopropoxy]-2,5-dioxo-, monosodium salt (9CI) (CA INDEX NAME)

L4 ANSWER 17 OF 19 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)



● Na

PAGE 1-B

-SO₃H

L4 ANSWER 18 OF 19 CAPLUS COPYRIGHT 2006 ACS on STN

AN 1992:169393 CAPLUS

DN 116:169393

TI Conformational changes in the foot protein of the sarcoplasmic reticulum assessed by site-directed fluorescent labeling

AU Kang, J. J.; Tarcaafalvi, A.; Carlos, A. D.; Fujimoto, E.; Shahrokh, Z.; Thevenin, B. J. M.; Shohet, S. B.; Ikemoto, N.

CS Dep. Muscle Res., Boston Biomed. Res. Inst., Boston, MA, 02114, USA

SO Biochemistry (1992), 31(12), 3288-93

CODEN: BICHAU; ISSN: 0006-2960

DT Journal

LA English

AB

Ca²⁺ release from sarcoplasmic reticulum during excitation-contraction coupling is likely to be mediated by conformational changes in the foot protein moiety of the triadic vesicles. As a preparative step toward the studies of dynamic conformational changes in the foot protein moiety, a new method was developed that permits specific labeling of the foot protein moiety of the isolated membranes with a fluorophore. A novel fluorescent cleavable photoaffinity crosslinking reagent, sulfo-succinimidyl 3-((2-(7-azido-4-methylcoumarin-3-acetamido)ethyl)dithio)propionate (SAED), was conjugated with site-directed carriers, polylysine (Ca²⁺-release inducer) and neomycin (Ca²⁺-release blocker). The conjugates were allowed to bind to polylysine- and neomycin-binding sites of the heavy fraction of SR (HSR). After photolysis, the crosslinking reagent was cleaved by reduction and

the

fluorescently labeled HSR was separated from the carriers by centrifugation.

These procedures led to specific incorporation of the methylcoumarin acetate (MCA) into the foot protein. Polylysine and neomycin bound to different sites of the foot protein, since neomycin, at release-blocking concns., did not interfere with polylysine binding. The fluorescence intensity of the foot protein labeled with the carrier, neomycin, showed biphasic changes as a function of ryanodine concentration (increasing up

to 1

μM ryanodine and decreasing about it), while with the carrier polylysine, ryanodine induced no change in fluorescence intensity. In contrast, the fluorescence intensity of the foot protein labeled with

each

of the two carriers, neomycin and polylysine, showed almost identical calcium dependence (first increasing from 0.1 μM to about 3.0 μM calcium concentration, and then decreasing at higher calcium concns.).

These

results suggest that modulation of Ca²⁺ release by ryanodine involves a local conformational change not only in the neomycin-binding region but also in the polylysine-binding region.

IT

139609-20-4

RL: ANST (Analytical study)

(foot protein site-directed labeling by)

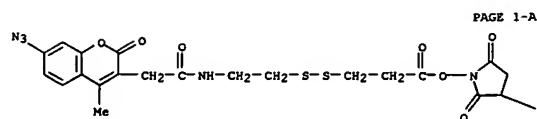
RN 139609-20-4 CAPLUS

CN 3-Pyrrolidinesulfonic acid, 1-[3-[[2-[[[7-azido-4-methyl-2-oxo-2H-1-benzopyran-3-yl]acetyl]amino]ethyl]dithio]-1-oxopropoxy]-2,5-dioxo-, monosodium salt (9CI) (CA INDEX NAME)

L4 ANSWER 18 OF 19 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)

L4 ANSWER 18 OF 19 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)

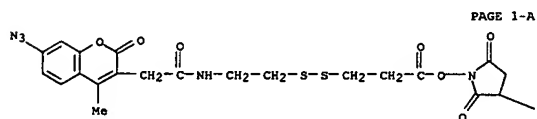
PAGE 1-B



PAGE 1-B

SO₃H

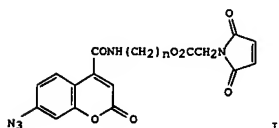
IT 139609-20-4DF, neomycin and polylysine derivs.
 RL: PREP (Preparation)
 AN 1985:149044 CAPLUS
 DN 102:149044
 RN 139609-20-4 CAPLUS
 CN 3-Pyrrolidinesulfonic acid, 1-[3-[[[2-[[[7-azido-4-methyl-2-oxo-2H-1-benzopyran-3-yl]acetyl]amino]ethyl]dithio]-1-oxopropoxy]-2,5-dioxo-, monosodium salt (9CI) (CA INDEX NAME)



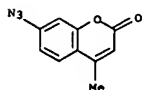
L4 ANSWER 19 OF 19 CAPLUS COPYRIGHT 2006 ACS on STN
 AN 1985:149044 CAPLUS
 DN 102:149044
 TI Organic fluorescent reagents. X. Multifunctional cross-linking reagents.

L4 ANSWER 19 OF 19 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)

I. Synthesis and properties of novel photoactivable, thiol-directed fluorescent reagents
 AU Kanaoka, Yuichi; Kobayashi, Akihiko; Sato, Eisuke; Nakayama, Hitoshi; Ueno, Takeshi; Muno, Daisaku; Sekine, Takamitsu
 CS Fac. Pharm. Sci., Hokkaido Univ., Sapporo, 060, Japan
 SO Chemical & Pharmaceutical Bulletin (1984), 32(10), 3926-33
 CODEN: CPBTAL; ISSN: 0009-2363
 DT Journal
 LA English
 GI



AB Bifunctional photo-activable fluorescent thiol reagents of a new type were synthesized. A maleimide group was bonded to an azidocoumarin group via a methylene chain as a spacer, e.g., I (n = 2,5). I (n = 2,5) were prepared by conversion of 7-aminocoumarin-4-carboxylic acid to the 7-azido derivative followed by amidation with amino alcs. and treatment with maleoylglycyl chloride. Reagents of this type react first with a cysteine residue of a protein through the maleimide group, and then form another bond with an amino acid side chain of the protein upon irradiation, with light, through a nitrene group formed from the azide. Although the reagent is non-fluorescent, the products are highly fluorescent. The fluorescence characteristics of model compds. of these reagents are also described.
 IT 95633-27-5P
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
 (preparation and photolysis of)
 RN 95633-27-5 CAPLUS
 CN 2H-1-Benzopyran-2-one, 7-azido-4-methyl- (9CI) (CA INDEX NAME)



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L5 21 SEA FILE=CAPLUS ABB=ON PLU=ON "EGLI ROBERT"/AU

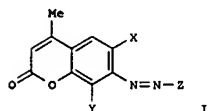
L6 1 SEA FILE=CAPLUS ABB=ON PLU=ON L5 AND (COUMARIN OR ?COUMARIN)

=> d bib abs

L6 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2006 ACS on STN
 AN 2004:355018 CAPLUS
 DN 140:340754
 TI Coumarin disperse azo dyes, their production and their use
 IN Egl, Robert
 PA Clariant International Ltd., Switz.
 SO PCT Int. Appl., 35 pp.
 CODEN: PIXXD2
 DT Patent
 LA English
 FAN.CNT 2

L6 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2006 ACS on STN (Continued)
 hydrophobic textiles such as polyester and show good overall fastness
 effects. In an example, 7-amino-4-methylcoumarin
 -1-butyl-3-cyano-6-hydroxy-4-methyl-2-pyridone was prepd. and
 applied as a fast yellow dye on polyester fabric.
 RE.CNT 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 2004035690	A1	20040429	WO 2003-1B4611	20031017
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
EP 1411089	A1	20040421	EP 2002-405894	20021018
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, SK				
EP 1556444	A1	20050727	EP 2003-751144	20031017
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				
BR 2003015494	A	20050823	BR 2003-15494	20031017
JP 2005503151	T2	20060126	JP 2004-544616	20031017
EP 2002-405894	A	20021018		
GB 2002-24513	A	20021022		
WO 2003-1B4611	W	20031017		
OS MARPAT 140:340754				
GI				



AB Disclosed are new azo dyes (I; X = H, Br, Cl, CN, SO₂Me, OH, OMe, NO₂; Y = H, Cl, Fr, CN; Z = coupling component group), their production, and their use in dyeing or jet or hot-melt printing. I are suited for use on

=> d his full

(FILE 'HOME' ENTERED AT 16:01:56 ON 09 FEB 2006)
DEL HIS

FILE 'REGISTRY' ENTERED AT 16:03:06 ON 09 FEB 2006

L1 STRUCTURE UPLOADED

L*** DEL 119 S LE1

L2 3 SEA SSS SAM L1

D SCAN

L3 78 SEA SSS FUL L1

FILE 'CAPLUS' ENTERED AT 16:03:52 ON 09 FEB 2006

L4 19 SEA ABB=ON PLU=ON L3

D QUE L4 STAT

D 1-19 BIB ABS HITSTR

E EGLI ROBERT/AU

L5 21 SEA ABB=ON PLU=ON "EGLI ROBERT"/AU

E L5 AND (COUMARIN OR ?COUMARIN)

L6 1 SEA ABB=ON PLU=ON L5 AND (COUMARIN OR ?COUMARIN)

D QUE L6 STAT

D BIB ABS

FILE REGISTRY

Property values tagged with IC are from the ZIC/VINITI data file provided by InfoChem.

STRUCTURE FILE UPDATES: 7 FEB 2006 HIGHEST RN 873775-18-9

DICTIONARY FILE UPDATES: 7 FEB 2006 HIGHEST RN 873775-18-9

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Please note that search-term pricing does apply when conducting SmartSELECT searches.

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* The CA roles and document type information have been removed from *
* the IDE default display format and the ED field has been added, *
* effective March 20, 2005. A new display format, IDERL, is now *
* available and contains the CA role and document type information. *
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*****
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Structure search iteration limits have been increased. See HELP SLIMITS for details.

REGISTRY includes numerically searchable data for experimental and predicted properties as well as tags indicating availability of experimental property data in the original document. For information on property searching in REGISTRY, refer to:

<http://www.cas.org/ONLINE/UG/regprops.html>

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FILE LAST UPDATED: 8 Feb 2006 (20060208/ED)

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